

Colorimetric Method

Method 10298

6.30 to 9.00 as pH

Chemkey® Reagents

Scope and application: For drinking water.



Test preparation

Before starting

Make sure that the sample is colorless and the turbidity value is less than 20 NTU.

Samples with a pH less than 3.5 can cause false positives.

Use a new Chemkey for each measurement.

Do not touch the Chemkey with hands.

Do not move the Chemkey after it is installed in the meter.

The display shows a progress bar with the time that remains until the measurement is completed. Different parameters have different reaction times.

The meter automatically identifies the type of Chemkey(s) that is installed.

Refer to the meter documentation for additional information.

The Chemkeys are articles and have no MSDS/SDS.

Dispose of reacted solutions according to local, state and federal regulations. Refer to the environmental, health and safety staff for your facility and/or local regulatory agencies for further disposal information.

Items to collect

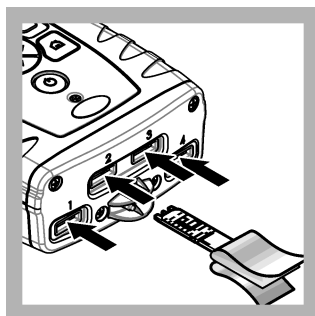
Description	Quantity
pH Chemkey Reagents	1

Refer to [Consumables and replacement items](#) on page 3 for order information.

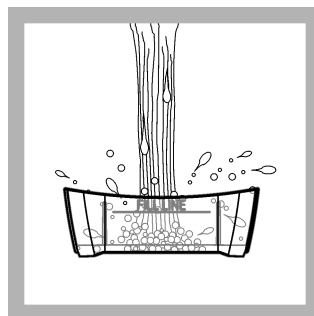
Test procedure



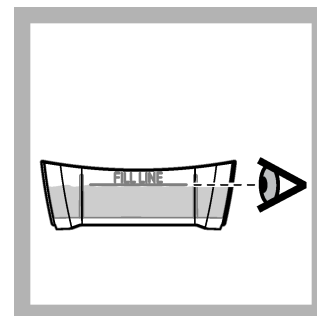
1. Peel back the packaging to show the end of the Chemkey. Do not touch the Chemkey with hands.



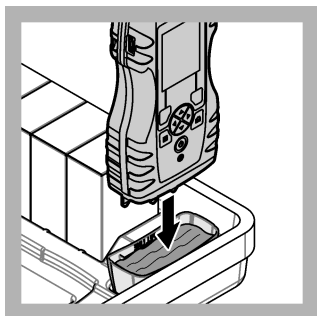
2. Put the Chemkey quickly in one movement into any slot. Carefully remove the packaging from the Chemkey.



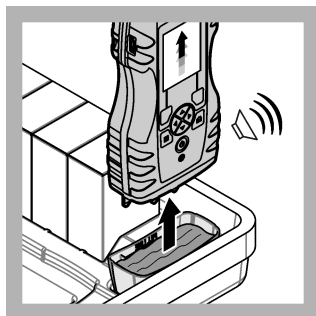
3. Rinse the sample cup with the sample.



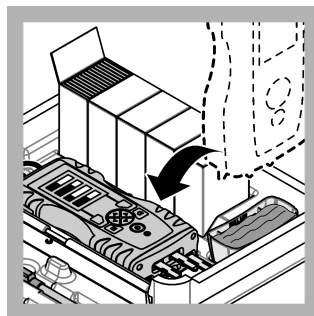
4. Fill the sample cup to the fill-line with sample.



5. Put the meter into the sample cup.



6. Wait for the sound alert and/or the meter removal animation (within 1 to 2 seconds), then immediately remove the meter from the sample cup.



7. Put the meter back into the case. Wait for the measurement to complete.

Interferences

The substances that are shown in [Table 1](#) do not interfere in the pH determination at or below the given concentration.

Table 1 Non-interfering substances

Substance	Maximum level tested	Substance	Maximum level tested
Alkalinity (as CaCO ₃)	1000 mg/L	Magnesium (as CaCO ₃)	250 mg/L
Aluminum (Al ³⁺)	0.2 mg/L	Manganese (Mn ²⁺)	0.2 mg/L
Calcium (as CaCO ₃)	1000 mg/L	Monochloramine (as Cl ₂)	5.0 mg/L
Chloride (Cl ⁻)	1200 mg/L	Nitrate (NO ₃ ⁻ -N)	50 mg/L
Copper (Cu ²⁺)	2.0 mg/L	Phosphate (as PO ₄ ³⁻)	4.0 mg/L
Fluoride (F ⁻)	4.0 mg/L	Sodium (as Na ⁺)	500 mg/L
Free Chlorine (as Cl ₂)	5.0 mg/L	Sulfate (SO ₄ ²⁻)	1000 mg/L
Iron (Fe ²⁺)	1.0 mg/L	Zinc (Zn ²⁺)	5.0 mg/L

Accuracy check

Standard solution method

Use the standard solution method to validate the test procedure, the reagents (if applicable) and the instrument.

Items to collect:

- pH 7.0 buffer solution, clear

1. Use the test procedure to measure the pH of the standard solution.
2. Compare the expected result to the actual result.

Method performance

The method performance data that follows was derived from laboratory tests during ideal test conditions. Users can get different results under different test conditions.

Standard	Precision (95% confidence interval)	Sensitivity Concentration change per 0.010 Abs change
pH 7.0 Buffer Solution	< ± 0.20 pH units	Not applicable

Summary of method

The pH Chemkey method uses a sulfonphthalein indicator (Phenol Red) to determine pH colorimetrically.

Consumables and replacement items

Description	Quantity/Test	Unit	Item no.
pH Chemkey [®] Reagents	1	25/pkg	9759000
Sample cup	1	each	9418100

Recommended standards

Description	Unit	Item no.
pH 7.0 Buffer Solution	500 mL	1222249



FOR TECHNICAL ASSISTANCE, PRICE INFORMATION AND ORDERING:
In the U.S.A. – Call toll-free 800-227-4224
Outside the U.S.A. – Contact the HACH office or distributor serving you.
On the Worldwide Web – www.hach.com; E-mail – techhelp@hach.com

HACH COMPANY
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Telephone: (970) 669-3050
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